



# Regional Kickoff: Needs Assessment

North Dakota Information Technology Department  
Network Services Division

11 - 13 December 2013

TELEVATE

# Needs Assessment Tasks

## Statewide Agencies

- Interview statewide agencies

## POC Survey

- Identify Point of Contact for all Agencies

## User Survey

- Identify Users Numbers

## Utilization Survey

- Assess Usage Characteristics

## Working Groups

- Technical Guidelines & Standards

## Incident Data

- Coverage & Usage Requirements

## 1<sup>st</sup> Round County Sessions

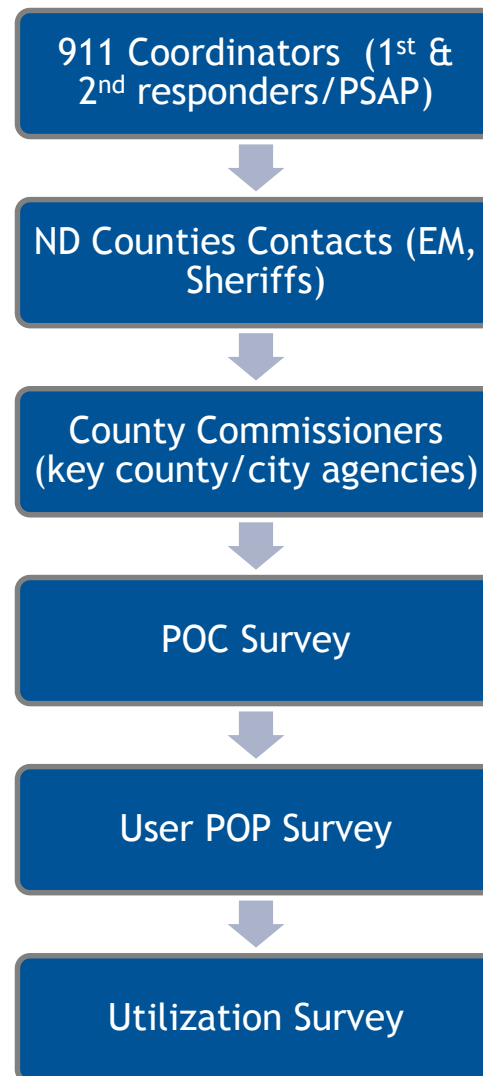
- Review Coverage Requirements

## 2<sup>nd</sup> Round County Sessions

- Assets & Review Requirements

# Needs Assessment - Identify the Stakeholders

- Goal:
  - Identify stakeholders
  - Quantify the user numbers
  - Qualify the usage characteristics & device types
  - Identify high-level requirements
- Survey Methods
  - Structured Interviews:
    - State agencies
  - User Population Survey
    - Existing users
    - Projected users
    - Unmet needs
    - Barriers to entry
  - Utilization Survey
    - types of devices & applications



# Survey Objectives

Survey Type	Objectives
POC Surveys:	<ul style="list-style-type: none"><li>■ Identify a POC for assessing the number of potential NPSBN subscribers</li><li>■ Identify a POC for assessing the user requirements</li><li>■ Identify a POC for identifying available infrastructure</li><li>■ Identify a POC for assessing the terrestrial coverage (public safety agencies only)</li></ul>

Survey Type	Objectives
User Population Survey <sup>3</sup> :	<ul style="list-style-type: none"><li>■ Assess the potential number of NPSBN subscribers</li><li>■ Assess the preferred device types</li><li>■ Assess the current spending</li><li>■ Assess the barriers to adoption</li></ul>

- Surveys tailored to each stakeholder community

# Survey Questions - Identification

## 2. Please indicate the affiliation of your agency

- Special District State Agency
- Township or City Government
- County Government
- State Government
- Other (please specify)
- Federal Government
- Tribal Government
- GOC, SOE, NGO or Hospital
- Multi-Governmental Agency

## 3. Indicate the category that best describes your agency.

- Law Enforcement
- Fire
- EMS, Medical Services or Mass Care
- Emergency Management
- Other Supporting Agency
- Other Public Safety (DHS, etc.)
- Transporations
- Public Works
- Public Schools

# Survey Questions - Subscribers Numbers

Please indicate the number of commercial network subscriptions you currently have for DATA ONLY SERVICES. This would include all USB Modems and PC Cards (does NOT include smartphones). Please indicate the total number of contracts within the agency you manage.

## 1. CURRENT DATA Subscribers:

AT&T Wireless	<input type="text"/>
Sprint Nextel	<input type="text"/>
T-Mobile	<input type="text"/>
Verizon Wireless	<input type="text"/>
MetroPCS	<input type="text"/>
US Wireless	<input type="text"/>
Other	<input type="text"/>

## 2. DATA Subscribers by 2015

AT&T Wireless	<input type="text"/>
Sprint Nextel	<input type="text"/>
T-Mobile	<input type="text"/>
Verizon Wireless	<input type="text"/>
MetroPCS	<input type="text"/>
US Wireless	<input type="text"/>
Other	<input type="text"/>

## 3. DATA Subscribers by 2020:

AT&T Wireless	<input type="text"/>
Sprint Nextel	<input type="text"/>
T-Mobile	<input type="text"/>
Verizon Wireless	<input type="text"/>
MetroPCS	<input type="text"/>
US Wireless	<input type="text"/>
Other	<input type="text"/>

Assuming budget restraints were not a factor, please indicate the number of subscribers your agency/department would deploy by the dates provided:

## 1. Subscribers by 2015

Data Only	<input type="text"/>
Voice & Data	<input type="text"/>
Voice Only	<input type="text"/>

## 2. Subscribers by 2020

Data Only	<input type="text"/>
Voice & Data	<input type="text"/>
Voice Only	<input type="text"/>

# Survey Questions - Utilization

**1. CURRENT: What type of wireless device(s) do you use? Check all that apply. Please note that "Computer" refers to both laptops, rugged laptops and/or data computers such as those sold by Data911. "Embedded Modem" refers to a wireless modem that is embedded inside the tablet or computer. The "Embedded Modem" is similar to the WiFi, with no external devices and is used for direct connectivity to AT&T, Sprint or Verizon Wireless (as an example).**

Smartphone

Tablet with Embedded Modem

Computer with Embedded Modem

Computer with USB Modem

Computer with PC Card or Express Card

Computer with Vehicular Modem (trunk mounted with Ethernet connection)

Other (please specify)

**2. FUTURE: What type of wireless device(s) would you prefer to use in the performance of your duties if given the opportunity? Check all that apply. Please note that "computer" refers to both laptops, rugged laptops and/or data computers such as those sold by Data911.**

Smartphone

Tablet with Embedded Modem

Computer with Embedded Modem

Computer with USB Modem

Computer with PC Card or Express Card

Computer with Vehicular Modem (trunk mounted with Ethernet connection)

Other (please specify)



# Survey Questions - Utilization

## 1. CURRENT APPLICATIONS: What applications do you currently use over the wireless network? Check all that apply.

- |  |  |
|--|--|
| <input type="checkbox"/> Incident Reporting: Records Management Systems      | <input type="checkbox"/> Mapping or Geospatial Data                                |
| <input type="checkbox"/> Database Lookups: Driver license, fingerprints, etc | <input type="checkbox"/> GIS-based Dispatch Data                                   |
| <input type="checkbox"/> Email, Desktop Extension                            | <input type="checkbox"/> AVL or Telemetry: vehicles, personnel, offender bracelets |
| <input type="checkbox"/> Internet Browsing                                   | <input type="checkbox"/> Biometrics/Vital Sign Monitoring                          |
| <input type="checkbox"/> Instant Messaging                                   | <input type="checkbox"/> SCADA for Facilities                                      |
| <input type="checkbox"/> Web Browsing  | <input type="checkbox"/> PC Software & Operating System Updates                    |
| <input type="checkbox"/> Low Resolution Video (Web quality)                  | <input type="checkbox"/> Voice: Cellular Communications, Full Duplex               |
| <input type="checkbox"/> High Resolution Video (TV quality)                  | <input type="checkbox"/> Voice: Push-to-Talk                                       |
| <input type="checkbox"/> Booking Photographs, Fingerprints or Images         |  |

Other (please specify)

## 2. FUTURE APPLICATIONS: What applications would you like the wireless network to support by 2015? Check all that apply.

- |  |  |
|--|--|
| <input type="checkbox"/> Incident Reporting: Records Management Systems      | <input type="checkbox"/> Mapping or Geospatial Data                                |
| <input type="checkbox"/> Database Lookups: Driver license, fingerprints, etc | <input type="checkbox"/> GIS-based Dispatch Data                                   |
| <input type="checkbox"/> Email, Desktop Extension                            | <input type="checkbox"/> AVL or Telemetry: vehicles, personnel, offender bracelets |
| <input type="checkbox"/> Internet Browsing                                   | <input type="checkbox"/> Biometrics/Vital Sign Monitoring                          |
| <input type="checkbox"/> Instant Messaging                                   | <input type="checkbox"/> SCADA for Facilities                                      |
| <input type="checkbox"/> Web Browsing  | <input type="checkbox"/> PC Software & Operating System Updates                    |
| <input type="checkbox"/> Low Resolution Video (Web quality)                  | <input type="checkbox"/> Voice: Cellular Communications, Full Duplex               |



# Survey Questions - Utilization

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1. Where do you need/intend to use your wireless device and have access to your wireless data applications? Check all that apply.

Outdoor

Inside vehicle

Inside single family home

Inside office buildings

- Where will the device be used
- How often will the device be used in this environment? (percentage of time)
- Ranking of Priorities
  - Environment
  - Application
  - Device Form Factors
    - Hardening, Buttons, (PTT, emergency), Qwerty Keyboard
  - Device Functionality
    - Bluetooth, Wi-Fi, WLAN, Commercial Roaming Options, Dual mode LMR/P25

# Coverage Assessment

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- Goal:
  - To quantify/qualify the stakeholder coverage requirements on a local and statewide level
- County-by-County review sessions
  - To assess the coverage priorities of the first responders
  - Detailed coverage requirements and usage cases
- Suitability of commercial carriers to meet the operational needs
- Potential assets identification
- Dialog regarding any obstacles to adopt FN service
  - Cost, Technology, Training, etc.

# Coverage Assessment - Review Sessions

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- There will be 2 rounds of regional meetings
  - Held on a County by County basis where available
  - 1<sup>st</sup> round will provide initial assessment of the county including:
    - Assess suitability of commercial carrier coverage
    - Identify points of presence
      - PSAP
      - Dispatch
      - Key coverage areas
    - Available infrastructure
    - Additional Needs
      - Poor coverage areas
      - Indoor coverage
      - Interoperability
  - 2<sup>nd</sup> round follow up meeting will focus on:
    - Provide an update on overall project status
    - Follow-up topics from first meeting
    - Confirm individual needs and infrastructure available

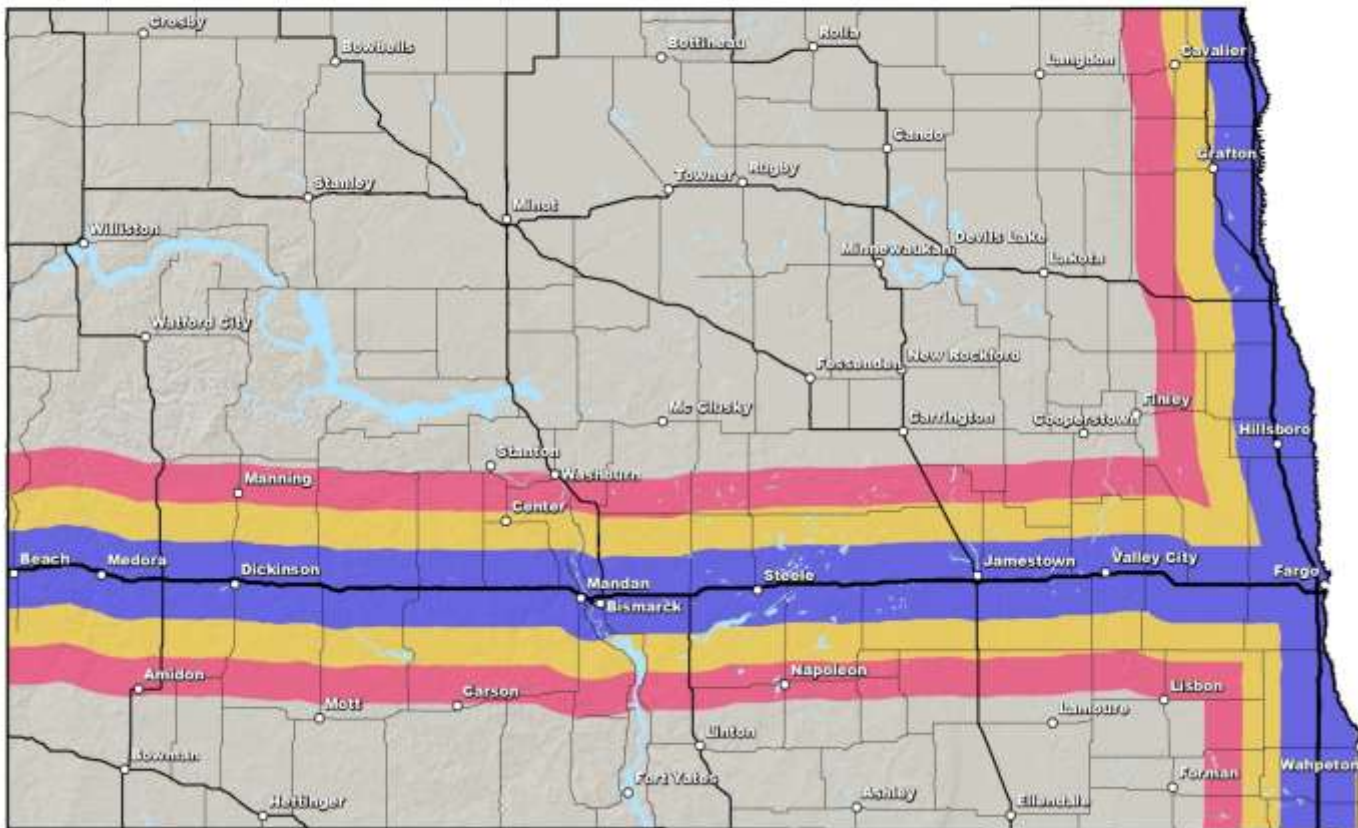
# Coverage based on Population Density

NORTH DAKOTA BROADBAND MAPPING PROGRAM

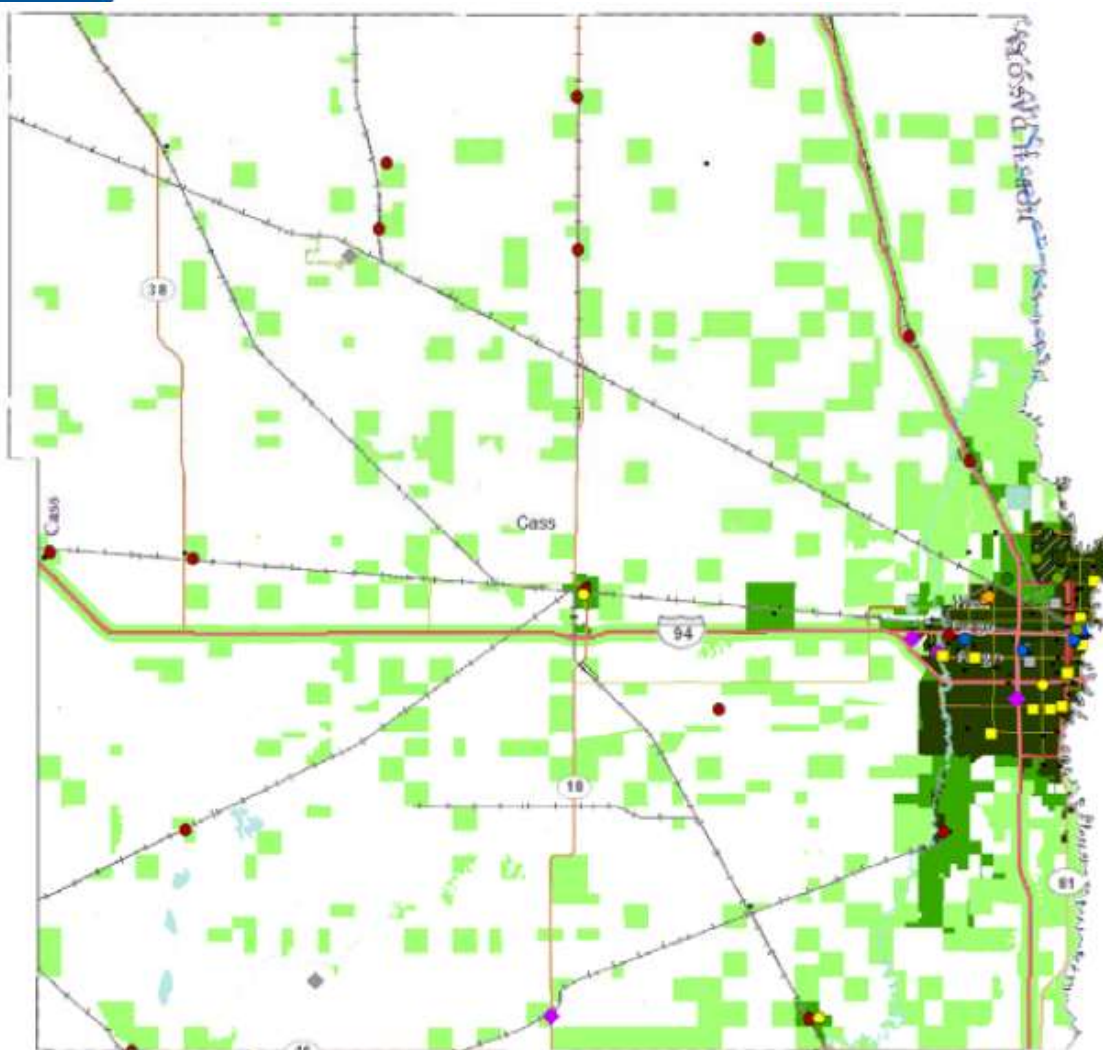
## POPULATION WITHIN DISTANCE OF INTERSTATE HIGHWAYS

10 Miles (403,035 people) 20 Miles (435,991 people) 30 Miles (458,062 people)

Total Population of North Dakota as of 2012 is 692,887



# Coverage Requirements - OEC Example

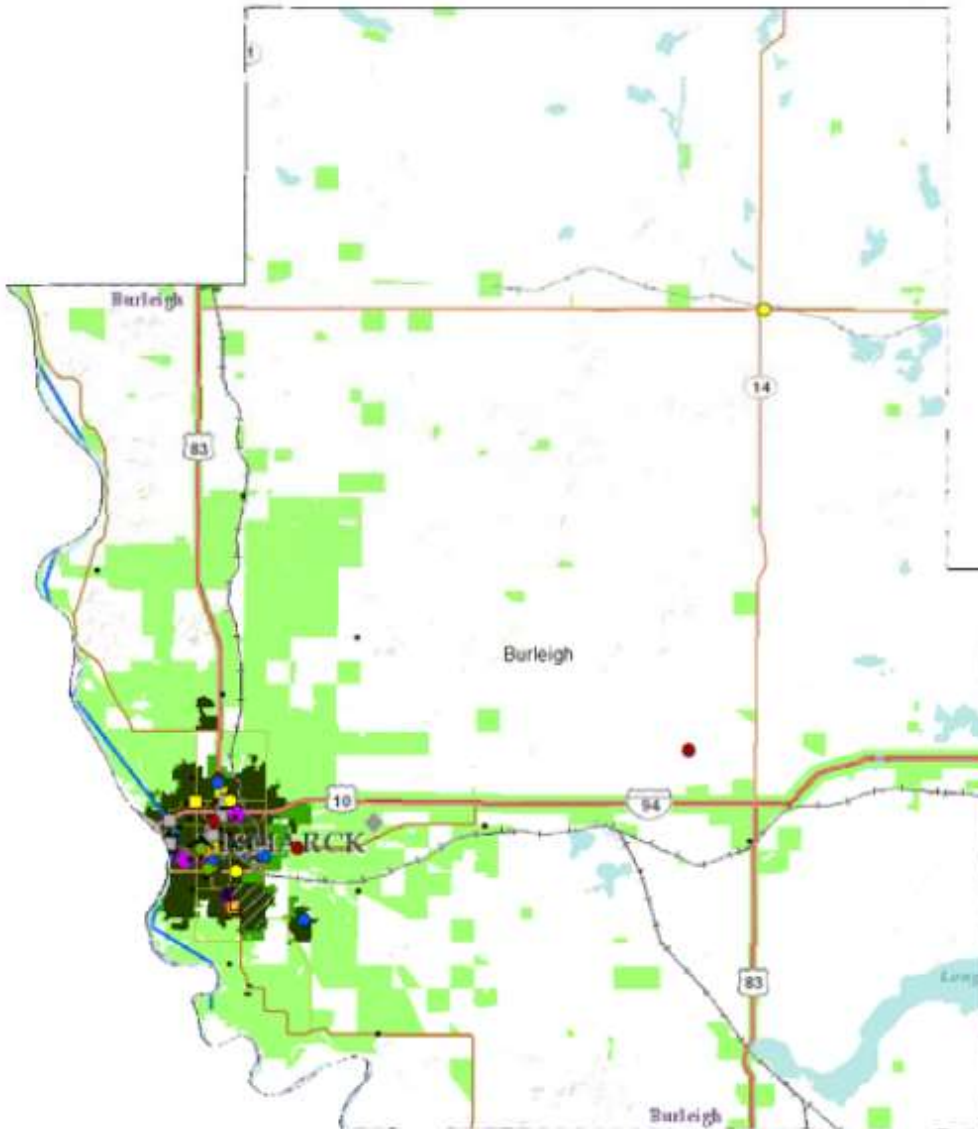


□ Proposed baseline meets the county coverage needs

Coverage Level	Coverage As Shown
In-Building	Urban Areas and Clusters (1,000+ people per square mile)
Handheld/ Partial In-Building	Census Designated Places
Vehicular Modem/ Partial Handheld	Interstates, major highways, rural areas with 5+ people per square mile
Satellite/ Deployable	All areas with less than 5 people per square mile



# Coverage Requirements - OEC Example #2



Proposed baseline meets the county coverage needs

Coverage Level	Coverage As Shown
In-Building	Urban Areas and Clusters (1,000+ people per square mile)
Handheld/ Partial In-Building	Census Designated Places
Vehicular Modem/ Partial Handheld	Interstates, major highways, rural areas with 5+ people per square mile
Satellite/ Deployable	All areas with less than 5 people per square mile

# Coverage Requirements - OEC Example #3



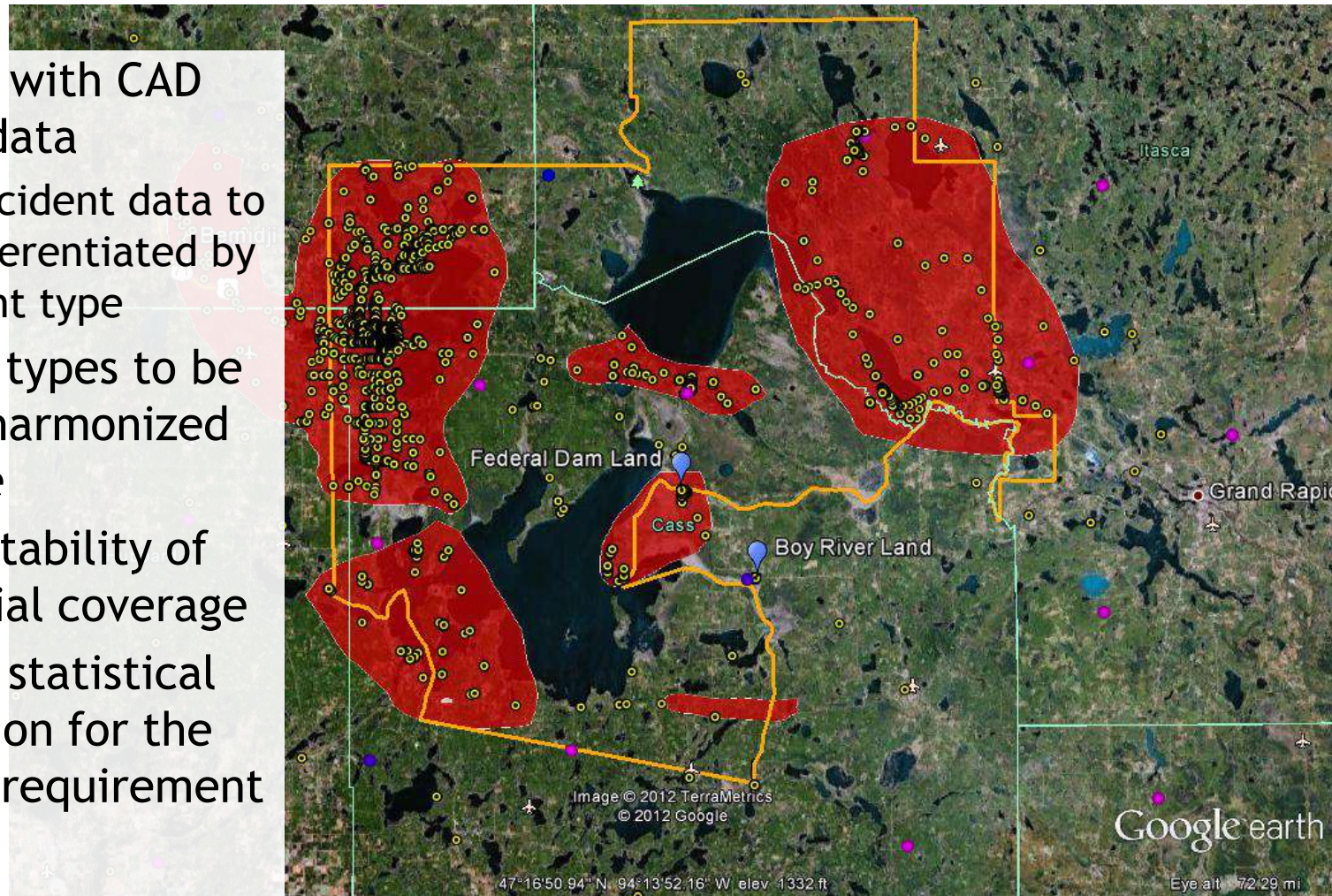
Proposed baseline meets the county coverage needs

Coverage Level	Coverage As Shown
In-Building	Urban Areas and Clusters (1,000+ people per square mile)
Handheld/ Partial In-Building	Census Designated Places
Vehicular Modem/ Partial Handheld	Interstates, major highways, rural areas with 5+ people per square mile
Satellite/ Deployable	All areas with less than 5 people per square mile



# Coverage Requirements per County

- Correlate with CAD incident data
  - CAD incident data to be differentiated by incident type
- Coverage types to be defined/harmonized statewide
- Assess suitability of commercial coverage
- Provide a statistical justification for the coverage requirement



# Commercial Carrier Evaluation

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- Goal:
  - Evaluate the viability of the commercial carriers to meet the needs of the State
- Structured interviews
  - Assess coverage
  - Future deployment plans
  - General ability to meet the State's requirements:
    - Public Safety Grade availability
    - Security, Operational Control, Coverage
    - Interoperability with existing systems

# Asset Identification & Inventory

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- Goal:
  - Assess the suitability of the State current databases, recommend changes, monitor the data input
- FirstNet Standards
  - To be based on FirstNet requirements
  - Leverage existing STATE databases to minimize database development
  - Stakeholders to upload their own data
- Outreach
  - Perform outreach to ensure that stakeholder are prepared for the data entry
- Monitoring
  - Continued monitoring and coordination with national efforts
- Phase 1 vs. Phase 2
  - This initial effort is seen as a Phase 1 activity
  - Phase 2 option to collect additional information

## Support & Next Steps

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- **Point of Contact Information of Stakeholders**
  - PSAP Contacts: List of Response Agencies
  - County Agencies: List of secondary users
    - Transportation, school buses, public works, public health
- **Volunteers for State-Agency Stakeholder Sessions**
  - Agencies grouped by discipline
  - 2 - 3 hour meetings
  - Require a POC (point of contact/agency)
- **Stakeholder Engagement**
  - Assist project team in engaging stakeholders (completing surveys, providing requirements)
- **Confirmation/Validation of Requirements**